

Work Order ID 63849



Page 1

Tuesday, November 16, 2010 2:28:04 PM

Item ID: D350-636-012

Accept



Setup Start



Revision ID:

Stop



Item Name: Skidtube RH

Start Date: 11/16/2010 Start Qty: 1.00



Cust Item ID:

Required Date: 11/30/2010 Req'd Qty: 1.00



Customer:

Reference:

Approvals:

Process Plan:

[Signature]

Date: 10-11-16

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

IIN-D350-636

H

100

0.00



DOCUMENT CONTROL

DC

Memo

0.00

Document Control

Photocopy blue file and type labels per PPP D350-636-012 CHG 006

[Signature] BG 10-12-8

B63849

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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NumberInsp.
Stamp

110

0.00



Skidtubes

Skidtubes

Memo

0.00

Skidtubes

1- Pick D2600-3 Bent

2- Deburr FWD and AFT ends, remove bending marks. Scribe batch# inside AFT end per dwg D2750

3- Drill pilot holes for blade fitting bolt holes using DT8983. Open to 0.500", deburr.

4- Locate DT8329 off of blade fitting bolt holes and drill pilot holes for blade fitting

5- Drill only two fwd step holes using DT9616. Ensure proper positioning.

6- Drill pilot holes as per Dwg D2750 sheet 4 (D2750-2 details). Drill using drill Jig DT8150 & DT8863A for first side only DT8863B for second side (detail K)

7- Clecko DT8863B on second side of tube and drill pilot holes for detail B.
SECOND SIDE

8-Open up holes for Detail B to 0.375" (4 holes per side) and blade fitting location holes to 0.500" (total of 4 holes per side) as per dwg D2750. Open up holes for ground handling and detail L to 0.500" (8 holes per side)

9-Drill pilot holes for wearplates as per Dwg D2750 using DT8108 open to 0.297".

10-Open up holes of Detail A to 0.297" (total of 2 holes per side)

BB

10/11/23

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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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11-Weld D2744 Cap as per Dwg D2750 and QSI 004.Fill grooves in bend left
from bending as per QSI 004
A/R Aluminum Rod batch: M165778

BE

10/11/24

12-Grind welds flush as per Dwg D2750

BB

10/11/24

120



QC

Quality Control

QC10- Inspect visual per QSI004- ground welds

0.00

Memo

0.00

S 10/11/24

130



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

Memo

0.00

S 10/11/24



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Approvals:

Process Plan: _____

Date: _____

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Date: _____

Run Start

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

140

Chemical Conversion Coat per QSI005 4.1

0.00



HandFinish

Memo

0.00

Hand Finishing

150

QC3- Inspect Part Finish

0.00



QC

Memo

0.00

Quality Control

BB 10/11/25

1 0 BE 10/11/25

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QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

160

0.00



Skidtubes

Skidtubes

0.00

Memo

1-Open up holes of Detail L and ground handling to 0.625" (total of 8 holes per side) as per dwg D2750.

2-Open up holes of Detail K to 0.750" (total of 4 holes per side) as per dwg D2750.

3-Open float holes to .500" (4 per Side)

4-Chamfer holes of Detail K, L, ground handling and float holes per dwg D2750 (welding instructions on sheet 9)

5-Deburr and blow out all chips from inside of tube

6-Prepare tube for welding, remove alodine as required.

7-Bond web D2739 in place as per QSI 015

A/R ☒ Sikaflex-291 batch: 116040 ☐ ☐ ☐
exp. date: 11-9-30

8- Weld spacers D3490-1, D3490-3 and D2743 as per dwg D2750 & QSI004 (welding instructions on sheet 9)

A/R ☐ Aluminum Rod batch: M115778

9- At section AP-AP drill out x-bolt spacer to 0.404"

10-Grind welds flush as per Dwg D2750

11-Spot face ground handling holes section (total of 4 places per side) as per

10/11/25

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Customer:

Reference:

Run Start

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

dwg D2750

12-Deburr holes

BE 10/11/29

170



QC

Quality Control

QC10- Inspect visual per QSI004- ground welds

0.00

Memo

0.00

8/10/11/29

180



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

Memo

0.00

8/10/11/29

FC

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Date:

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

190



HandFinish

Pressure Wash per QSI005 4.3

0.00

=7 M

10/12/01

1

Ø

Hand Finishing

Memo

0.00

Re-alodine tube as per QSI 005 section 4.1.2.1 do not acid etch.

200



Powdercoat

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00

M115951

Memo

0.00

START TIME: 10:35
OVEN TEMPERATURE: 320°
FINISH TIME: 11:05

1 BL 10-12-7

Powder Coating

210



QC

QC3- Inspect Part Finish

0.00

=7 M

10/12/07

1

Ø

Quality Control

Memo

0.00

Inspect for foreign object per QSI 024

W/O:		WORK ORDER CHANGES					
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Run Start

QC: Date: SPC (Y/N): Date:

Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

220



HandFinish

Hand Finishing

HandFinishing

Memo

✓ Install inserts as per dwg D2750

0.00

=) MU

10/12/07

0.00

1 Ø

230



HandFinish

Hand Finishing

HandFinishing

Memo

✓ 1-Inspect for Foreign Objects

2-Spray inside of tube with "LPS-3"
batch: N/A

3-Install blade fitting D3488-042, wearshoes and ground handling hardware as
per dwg D2750

SIKA FLEX 241

BATCH: M1151N

EXP DATE: 11/01

4-assemble o-ring to plug as per dwg D3492 and apply o-ring lube
✓ A/R 55-o-ring lube batch: M114189

✓ 5-Coat all exposed fasteners with "LPS Procyon"
batch: M114596

0.00

0.00

=) MU

10/12/07

1 Ø

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Process Plan:

Date:

Tooling:

Date:

Run Start

QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool # Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

240

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

BL / ml 10 / 11 / 08 ①

250

Pick Kit

0.00



Packaging

Memo

0.00

Packaging

10/12/08

260

QC4- 100% Inspect kits for completeness

0.00



QC

Memo

0.00

Quality Control

ml 10 12 10 ①

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Tooling:

Date:

Run Start

QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
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Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

270

0.00



Packaging

Packaging

Memo

0.00

Packaging

Package as per PPP D350-636-012

10072 Rev1

10/12/138

280

0.00



QC

QC21- Final Inspection - Work Order Release

Memo

0.00

Quality Control

10/12/14

U 10/12/14

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Picklist Print

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Parent Item Name: Skidtube RH



Start Date: 11/16/2010

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Start Qty: 1.00

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Comments: IPP Rev: I 02.09.25 Rearranged procedure steps KJ
 IPP Rev: J 06-03-29 As per Rev D EC
 IPP Rev: K 06-07.13 As per dsi9343 EC
 IPP Rev: L 07-07-28 Added SS Wearplates (Rev E) JLM Verified By: EC
 IPP Rev: M 08-04-22 update steps 4,13 DD verified by: EC
 IPP Rev: N 08-09-23 revF as per dwg DD verified by: ec IPP Rev: O
 10.06.22 revise seq 110 DD ver: EC IPP Rev: P 10.10.01 as
 per IIN revH DD ver: EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
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ALS4-1032-225		Purchased	No			220	Each	4,520.000	38	38			
<div style="display: flex; justify-content: space-between;"> <div> <p>Insert</p> </div> <div> <p>38</p> </div> <div> <p>10/12/07</p> </div> </div>													

				Location		Loc Qty		Loc Code					
				PK011		4520							
				110768		4520							
AN3C5A		Purchased	No			230	Each	888.0000	34	34			
<div style="display: flex; justify-content: space-between;"> <div> <p>Bolt</p> </div> <div> <p>34</p> </div> <div> <p>10/12/07</p> </div> </div>													

				Location		Loc Qty		Loc Code					
				ST350		878							
				114330		11							
				115015		13							
				115371		100							
				115422		100							
				115594		282							
				115835		372							
				ST351		10							
				113121		10							

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Start Qty: 1.00

Required Qty: 1.00

AN3C6A	Purchased	No	230	Each	245.0000	4	4
							11/12/07
BOLT							



<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
-----------------	----------------	-----------------

ST351	245	
111982	245	x4

AN6C44A	Purchased	No	230	Each	119.0000	4	4
							11/12/07
BOLT							



<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
-----------------	----------------	-----------------

FG	2	
103964	2	
ST344	117	
111649	2	
114653	1	
114941	64	x4
115936	50	

AN8C35A	Purchased	No	230	Each	54.0000	1	1
							11/12/07
BOLT							

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
-----------------	----------------	-----------------

ST346	54	
114442	5	
115188	22	x1
115960	27	

AN960C10L	NAS1149C0332 R	Purchased	No	230	Each	25.0000	38	38
							11/12/07	
washer								

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
-----------------	----------------	-----------------

ST245	25	
107534	25	x38

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Shop Packet Print

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Required Date: 11/30/2010

Start Qty: 1.00

Required Qty: 1.00

AN960C816L

Purchased No

230 Each

0.0000

1

1



✓ NAS1149C08332R / M114915



xl 10/12/07

WASHER

D2745

Manufactured No

230 Each

265.0000

8

8



xl 10/12/07

Bushing

Location

Loc Qty

Loc Code

ST023

265

52311

5

59112

4

61203

44

61988

104

63315

108

x8

D3488-042

Manufactured No

230 Each

24.0000

1

1



xl 10/12/07

Blade Fitting Assembly, RH

Location

Loc Qty

Loc Code

FP008

15

59643

5

62003

10

FP18

9

61690

9

x1

D3492-041

Manufactured No

230 Each

76.0000

8

8



xl 10/12/07

Plug Assembly

Location

Loc Qty

Loc Code

FP013

76

59114

1

61987

14

62210

61

x8

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Tuesday, November 16, 2010 2:28:08 PM

Page 4

Work Order ID: 63849

Parent Item: D350-636-012

Parent Item Name: Skidtube RH

Start Date: 11/16/2010

Required Date: 11/30/2010

Start Qty: 1.00

Required Qty: 1.00

D3492-043

Manufactured No

230

Each

85.0000

8

8



Plug Assembly

Location

Loc Qty

Loc Code

FP

2

54682

2

FP013

83

59117

1

59190

4

62663

78



10/12/07

D3535-25

Manufactured No

230

Each

21.0000

1

1



Wearshoe

Location

Loc Qty

Loc Code

FP18

21

62033

7

62233

14



10/12/07

D3536-25

Manufactured No

230

Each

4.0000

1

1



Gasket

Location

Loc Qty

Loc Code

FP12

4

61707

4

B63857



10/12/07

D3537-1

Manufactured No

230

Each

18.0000

3

3



Wearpad

Location

Loc Qty

Loc Code

FP017

18

62661

9

63313

9

B63545



10/12/07

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Page 4

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Tuesday, November 16, 2010 2:28:08 PM

Page 5

Work Order ID: 63849

Parent Item: D350-636-012

Parent Item Name: Skidtube RH

Start Date: 11/16/2010

Required Date: 11/30/2010

Start Qty: 1.00

Required Qty: 1.00

D3631-1

Manufactured No

230

Each

281.0000

8

8



Washer

Location

Loc Qty

Loc Code

ST072

281

60755

81

63647

200

x8

D3672-1

Manufactured No

230

Each

665.0000

4

4



Phenolic Washer

Location

Loc Qty

Loc Code

ST077

665

42329

10

52505

655

x4

D3791-1

Manufactured No

230

Each

19.0000

1

1



Wearplate

Location

Loc Qty

Loc Code

FP17

19

61702

7

62239

12

x1

D3793-1

Manufactured No

230

Each

16.0000

1

1



Wearshoe

Location

Loc Qty

Loc Code

FP18

16

59151

1

59630

1

61244

1

61710

13

x1

Tuesday, November 16, 2010 2:28:08 PM

Shop Packet Print

Page 5

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Tuesday, November 16, 2010 2:28:08 PM

Work Order ID: 63849

Parent Item: D350-636-012

Parent Item Name: Skidtube RH

Start Date: 11/16/2010

Required Date: 11/30/2010

Start Qty: 1.00

Required Qty: 1.00

D3793-3

Manufactured No

230

Each

13.0000

1



Wearshoe



11/12/07

Location

Loc Qty

Loc Code

FP18

12

61711

12

V1

FP19

1

57947

1

D3794-1

Manufactured No

230

Each

20.0000

1



Gasket



11/12/07

Location

Loc Qty

Loc Code

FP010

20

61704

20

X1

D3794-3

Manufactured No

230

Each

25.0000

1



Gasket



11/12/07

Location

Loc Qty

Loc Code

FP10

24

60826

1

61712

23

X1

FP18

1

59153

1

MS21043-6

Purchased No

230

Each

618.0000

4



NUT



11/12/07

Location

Loc Qty

Loc Code

ST301

618

112314

618

X4

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Tuesday, November 16, 2010 2:28:08 PM

Page 7

Work Order ID: 63849

Parent Item: D350-636-012

Parent Item Name: Skidtube RH

Start Date: 11/16/2010

Required Date: 11/30/2010

Start Qty: 1.00

Required Qty: 1.00

MS21083C8

Purchased

No

230

Each

87.0000

1

1



10/12/07

NUT

Location

Loc Qty

Loc Code

ST303

87

113845

5

114934

3

115594

29

115884

50

Y1

NAS1611-010

Purchased

No

230

Each

309.0000

8

8



10/12/07 PTO

O-RING

Location

Loc Qty

Loc Code

FP

309

110715

100

110915

159

115589

50

NAS1611-013

Purchased

No

230

Each

228.0000

8

8



10/12/07

O-RING

Location

Loc Qty

Loc Code

FP

228

115460

100

115589

28

115812

100

X8

W/O: 63849

WORK ORDER CHANGES

DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
10/12/04	230	Replace NAS1611-010 "O" rings for D2594-3 / M61762 "O" ring	W	10/12/04	x8		

Part No: D350-636-012 PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Page 8

Tuesday, November 16, 2010 2:28:08 PM

Work Order ID: 63849

Parent Item: D350-636-012

Parent Item Name: Skidtube RH

Start Date: 1/16/2010

Required Date: 11/30/2010

Start Qty: 1.00

Required Qty: 1.00

AN8C21A



BOLT

Purchased No

250

Each

45.0000



2

10/12/10

SD

Location

Loc Qty

Loc Code

ST345

45

113558

1

114653

4

115723

40

250

Each

123.0000



2

10/12/10

SD

AN960JD816



1/2" washer, Alum

Purchased No

Location

Loc Qty

Loc Code

ST348

123

106043

123

250

Each

25.0000



1

10/12/10

SD

D2741



Blade, 350 Skidtube

Manufactured No

Location

Loc Qty

Loc Code

ST466

25

60210

25

250

Each

36.0000



2

10/12/10

SD

D3493-1



Washer

Manufactured No

Location

Loc Qty

Loc Code

ST062

36

61672

36

2

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Tuesday, November 16, 2010 2:28:08 PM

Page 9

Work Order ID: 63849

Parent Item: D350-636-012

Parent Item Name: Skidtube .H

Start Date: 11/16/2010

Required Date: 1/30/2010

Start Qty: 1.00

Required Qty: 1.00

D3532-1

Manufactured No

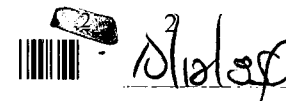
250

Each

47.0000



Spacer



Location

Loc Qty

Loc Code

ST065

47

61673

5

62218

42

250

Each

792.0000

D3672-13

Purchased No



Phenolic Washer



Location

Loc Qty

Loc Code

ST077

792

54363

792

250

Each

87.0000

MS21083C8

Purchased No



NUT



Location

Loc Qty

Loc Code

ST303

87

113845

5

114934

3

115594

29

115884

50

110

Each

13.0000

D2600-3-BENT

Manufactured No



Extrusion Bent



Location

Loc Qty

Loc Code

LG

13

61634

4

62594

8

62764

1

Handwritten signature and date 11/1/23

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Page 9

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Tuesday, November 16, 2010 2:28:08 PM

Page 10

Work Order ID: 63849

Parent Item: D350-636-012

Parent Item Name: Skidtube L.H

Start Date: 11/16/2010

Required Date: 1/30/2010

Start Qty: 1.00

Required Qty: 1.00

D2744

Manufactured No

110

Each

39.0000

1

1



Cap

Location

Loc Qty

Loc Code

LG

6

59198

6

ST

33

62715

33

1 BE 10/11/24

D2739

Manufactured No

160

Each

12.0000

1

1



3501 Beam

Location

Loc Qty

Loc Code

LG

12

62563

8

62688

4

1

BE 10/11/25

D2743

Manufactured No

160

Each

150.0000

8

8



Crossbolt Spacer

Location

Loc Qty

Loc Code

LG

150

50281

10

57953

2

59111

31

61844

107

8 BE 10/11/29

D3490-3

Manufactured No

160

Each

39.0000

4

4



Cross Bolt Spacer

Location

Loc Qty

Loc Code

LG

39

60294

1

62668

38

4 BE 10/11/29

Tuesday, November 16, 2010 2:28:08 PM

Shop Packet Print

Page 10

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Page 11

Tuesday, November 16, 2010 2:28:08 PM

Work Order ID: 63849



Parent Item: D350-636-012



Parent Item Name: Skidtrk RH

Start Date: 11/16/2010

Required Date: 11/30/2010

Start Qty: 1.00

Required Qty: 1.00

D3490-1

Manufactured No

160

Each

95.0000

4

4



Cross Bolt Spacer

Location

Loc Qty

Loc Code

LG

95

59424

3

61217

2

62450

90

4 BE10/11/29

Tuesday, November 16, 2010 2:28:08 PM

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Page 11

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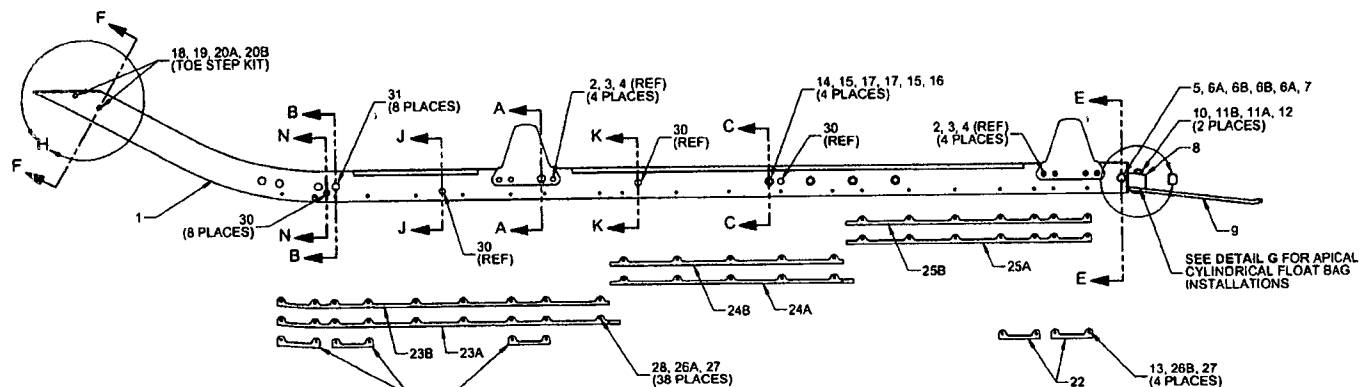
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

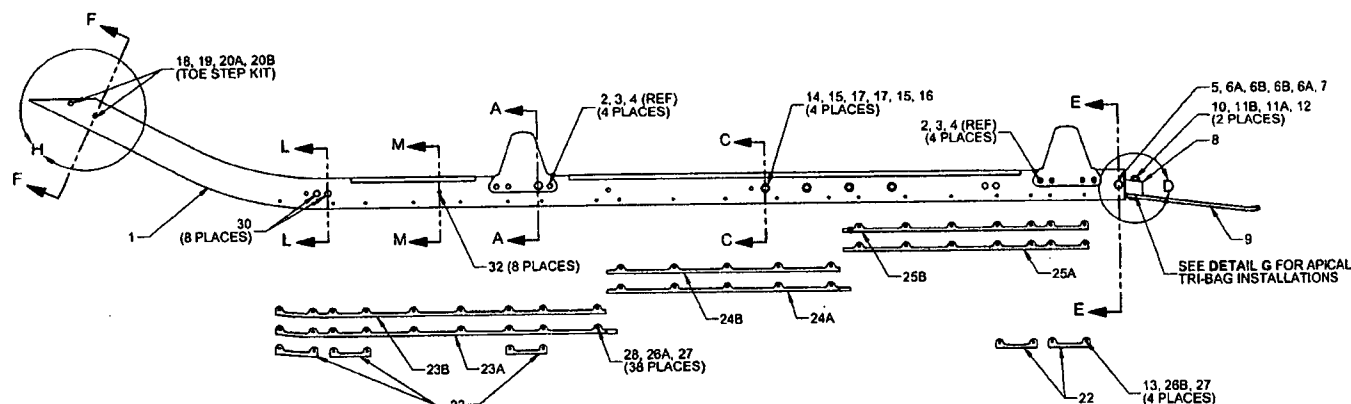
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NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



D350-636-011/-012 ASSEMBLY
(Aerazur / Apical Cylindrical)



D350-636-013/-014 ASSEMBLY
(Aircruiser / Apical Tri-Bag)

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WORK ORDER
NO. 63849

B. 10-11-16

Figure 1: D350-636-011/-012/-013/-014 SKIDTUBE ASSEMBLY AT CHG 003

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Revision: H

Date: 10.07.26

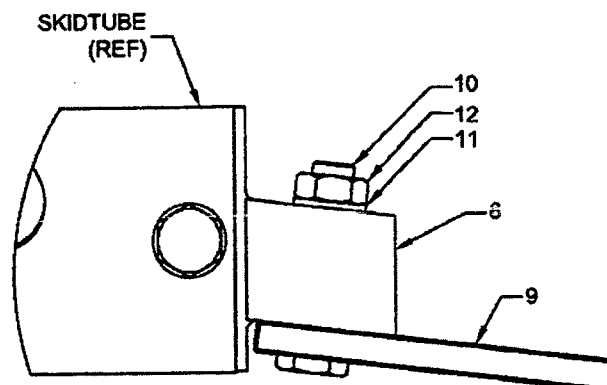
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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

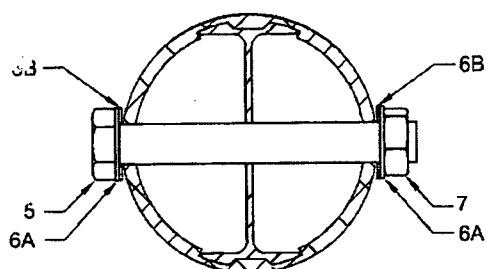
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NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

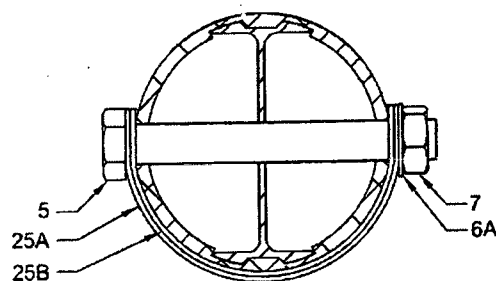
NOTE: Date & initial all entries



DETAIL D
1 PL PER SKIDTUBE

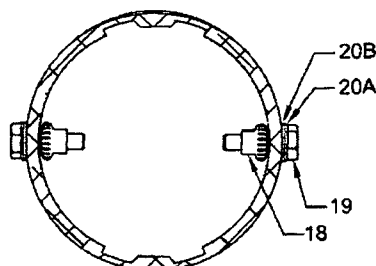


SECTION E-E
(D350-636-011/-012/-013/-014 SKIDTUBES
AT CHG 003 ONLY)



SECTION Q-Q
(D350-636-011/-012/-013/-014 SKIDTUBES
AT CHG 004 OR SUBSEQUENT)

all 63849



SECTION F-F
2 PL PER SKIDTUBE

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Revision: H
Date: 10.07.26

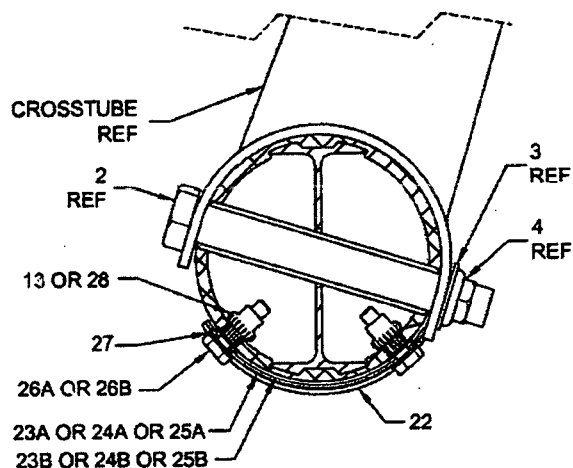
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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

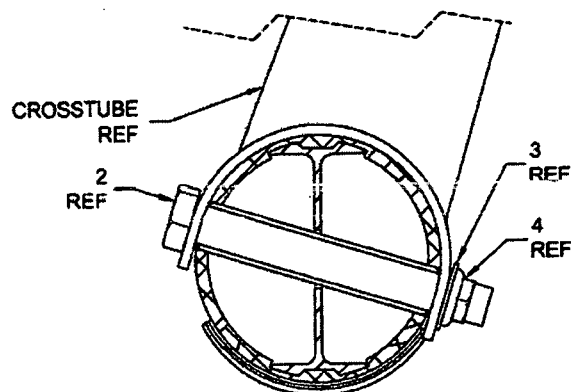
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



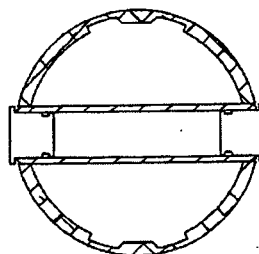
SECTION A-A

(D350-636-011/-012/-013/-014 SKIDTUBES
AT CHG 003 ONLY)



SECTION P-P

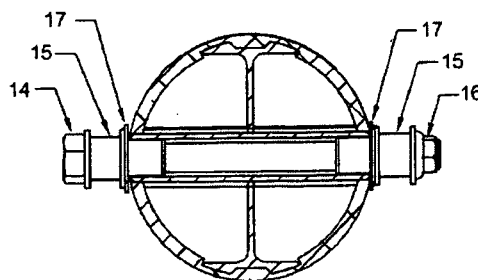
(D350-636-011/-012/-013/-014 SKIDTUBES
AT CHG 004 OR SUBSEQUENT)



30 (SECTION J-J AND K-K AND L-L)
OR 31 (SECTION B-B)
OR 32 (SECTION M-M)
(BOTH SIDES)

SECTION B-B

(SECTION J-J, K-K, L-L AND M-M SIMILAR)
8 PL PER SKIDTUBE



SECTION C-C

4 PL PER SKIDTUBE

4043849

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

QTY -041	QTY -042	QTY -043	QTY -044	PART NUMBER	DESCRIPTION
X				D2750-041	350 SKIDTUBE ASSEMBLY, LH
	X			D2750-042	350 SKIDTUBE ASSEMBLY, RH
				D2750-043	350 SKIDTUBE ASSEMBLY, LH
			X	D2750-044	350 SKIDTUBE ASSEMBLY, RH
1	1	1	1	D2739	WEB
8	8	8	8	D2743	SPACER
1	1	1	1	D2744	CAP
8	8	8	8	D2745	BUSHING
1				D2750-1	SKIDTUBE WELDMENT, LH
	1			D2750-2	SKIDTUBE WELDMENT, RH
		1		D2750-3	SKIDTUBE WELDMENT, LH
			1	D2750-4	SKIDTUBE WELDMENT, RH
1		1		D3488-041	BLADE FITTING, LH
	1		1	D3488-042	BLADE FITTING, RH
4	4	4	4	D3490-1	SPACER
4	4			D3490-3	SPACER
		4	4	D3490-5	SPACER
8	8	8	8	D3492-041	PLUG ASSEMBLY
8	8			D3492-043	PLUG ASSEMBLY
		8	8	D3492-045	PLUG ASSEMBLY
1	1	1	1	D3535-25	WEARSHOE
1	1	1	1	D3536-25	GASKET
3	3	3	3	D3537-1	WEARPAD
8	8	8	8	D3631-1	WASHER
1	1	1	1	D3791-1	WEARPLATE
1	1	1	1	D3793-1	WEARSHOE
1	1	1	1	D3793-3	WEARSHOE
1	1	1	1	D3794-1	GASKET
1	1	1	1	D3794-3	GASKET
38	38	38	38	ALS4-1032-225	INSERT (OR ALS7-1032-225, AKS4-1032-225, AELS-1032-225)
34	34	34	34	AN3C5A	BOLT
4	4	4	4	AN3C6A	BOLT
4	4	4	4	AN6C44A	BOLT
1	1	1	1	AN8C35A	BOLT
38	38	38	38	AN960C10L	WASHER
1	1	1	1	AN960C816L	WASHER
4	4	4	4	MS21043-6	NUT
1	1	1	1	MS21083C8	NUT
4	4	4	4	NAS1515H3L	WASHER

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NO. 63849
BS10-11-18

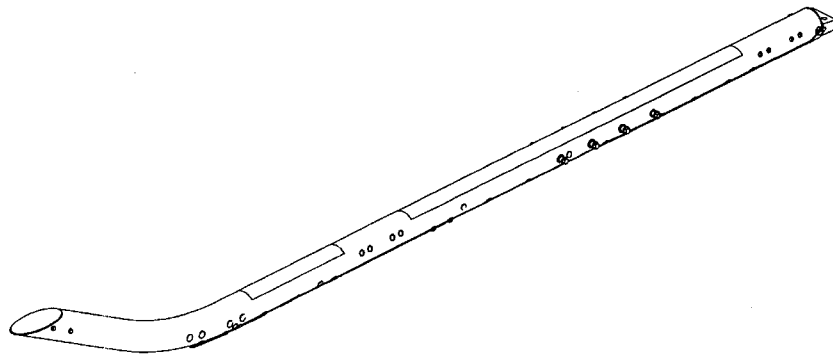
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63849

GENERAL NOTES:

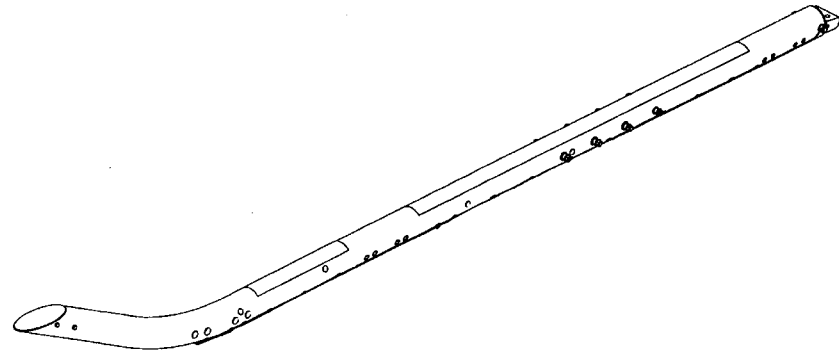
- MATERIAL: MAKE D2750-1/-2/-3/-4 FROM D2600-3 EXTRUSION (INITIAL LENGTH = 120.0).
- FINISH:
ACID ETCH, ALONDE ASSEMBLY PER DART QSI 005 4.1 PRIOR TO INSTALLING D2739 WEB.
POWDER COAT WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3
BLACK ANTI-SKID PAINT AS INDICATED TO 1.0 ABOVE SKIDTUBE CENTER-LINE PER DART 005 4.4 (OPTIONAL).
- TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- UNITS: INCHES UNLESS OTHERWISE NOTED
- BREAK SHARP EDGES: N/A
- IDENTIFICATION: N/A
- WEIGHT: D2750-041/-042/-043/-044 = 26.5 LBS
- WELD PER DART QSI 004
- INSTALL ALS4-1032-225 INSERTS AFTER FINISH AS INDICATED. DRILL 'F' SIZE HOLES ($\phi 0.297$) FOR WEARSHOE INSERTS
- FINAL CONFIGURATION SHOULD HAVE THE FOLLOWING MINIMUM MECHANICAL PROPERTIES:
MINIMUM YIELD TENSILE STRENGTH = 35 KSI
MINIMUM ULTIMATE TENSILE STRENGTH = 38 KSI
- SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH AND AFTER INSTALLATION OF INSERTS.
COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF
POWDER COATING WITH MEK DEGREASER.
- SPACER AND PLUG INSTALLED SAME AS SECTION AJ-AJ EXCEPT HORIZONTAL Δ
- SPACER AND PLUG INSTALLED SAME AS SECTION AP-AP EXCEPT HORIZONTAL

F	INCORPORATE DSI 9413; QTY (3) D3537-1 WAS QTY (5) (ZN C8-1); D3791-1/3 REPLACES D3535-13/-35 (ZN C8-1); D3794-1/3 REPLACES D3536-13/-35 (ZN B8-1); ADD D3791-1 (ZN C8-1); WEARSHOE HOLES UNDER FWD/AFT SADDLE REMOVED (8 PL). WEARSHOE HARDWARE QTY UPDATED (ZN B8-1); D3488-041/-042 HARDWARE UPDATED (ZN C1-8, 9, 10, 11); ADD NOTE 12 AND 13 (ZN A6-1); REASON: REF. NCR 08-043	PH	08.07.16
E	CHANGE TO STAINLESS STEEL WEARPLATES; ADD RUBBER GASKETS, CHANGE INSERTS, ADD D3631-1; REMOVE QTY (38) NAS1515H3L; REMOVE QTY (10) NAS1515H8L; REMOVE D2741, QTY (2) AN960C816; REMOVE QTY (2) MS21083C8	CB	07.05.17
D	ADD HOLES AND SPACERS FOR APICAL FLOATS; INCORPORATE DEO 9133/9157	PH	06.01.05
C	ADD D2750-3/D2750-4; INCORPORATE D2738 AND D2740	CP	98.11.18
B	CHANGE MS24694-S293 TO AN8-16A	CP	98.09.01
A	NEW ISSUE	DS	98.04.16
REV.	DESCRIPTION	BY	DATE
DESIGN	<u>PH</u>	DART AEROSPACE USA, INC.	
DRAWN	<u>PH</u>	PORT HADLOCK, WA	
CHECKED	<u>PH</u>	DRAWING NO.	REV. F
MFG. APPR.	<u>PH</u>	D2750	SHEET 1 OF 11
APPROVED	<u>PH</u>	TITLE	SCALE
DE APPR.	<u>PH</u>	350 SKIDTUBE ASSEMBLY	NTS
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w/o 63849



D2750-041 350 SKIDTUBE ASSEMBLY, LH

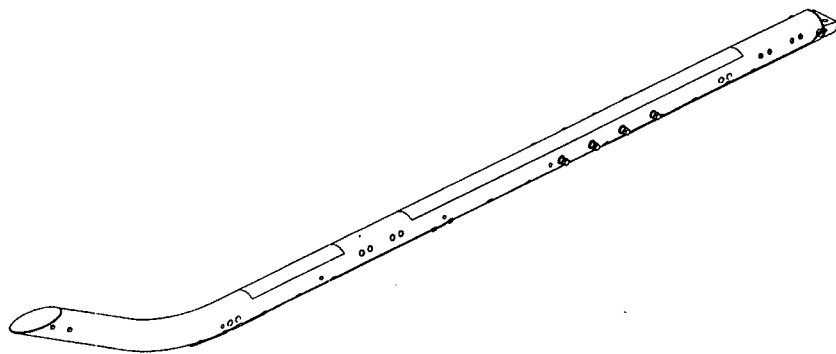


D2750-042 350 SKIDTUBE ASSEMBLY, RH

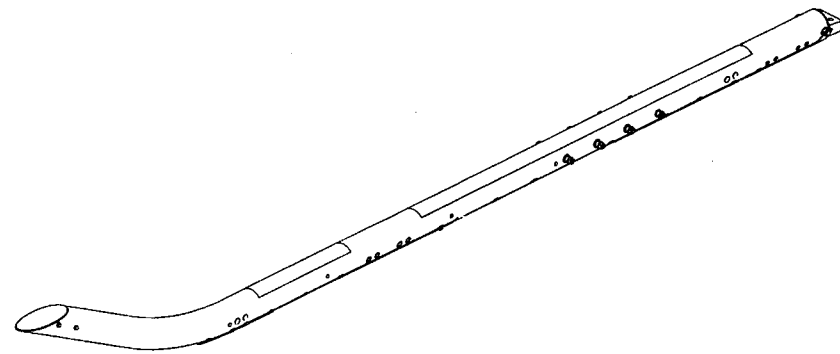
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08-09-22-14

DESIGN	PC	DART AEROSPACE USA, INC.	
DRAWN	PC	PORT HADLOCK, WA	
CHECKED	PC	DRAWING NO.	REV. F
MFG. APPR.	PC	D2750	SHEET 2 OF 11
APPROVED	PC	TITLE	SCALE
DE APPR.	PC	350 SKIDTUBE ASSEMBLY	NTS
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w/o 63849



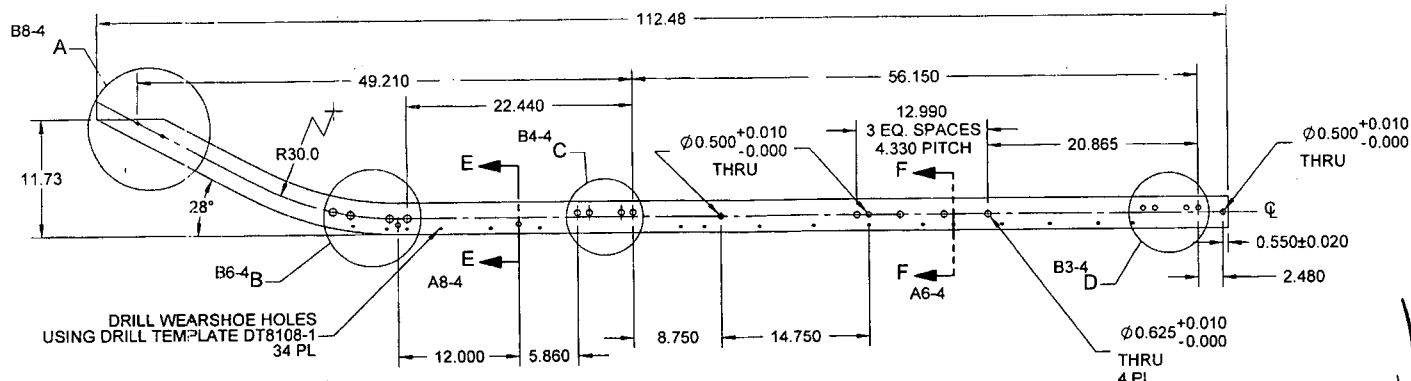
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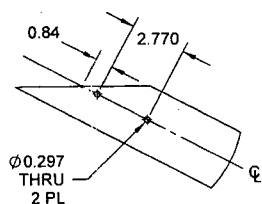
D2750-044 350 SKIDTUBE ASSEMBLY, RH

RELEASED
68-09-22/100

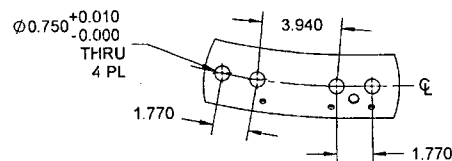
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DRAWN	PO	PORT HADLOCK, WA	
CHECKED	MA	DRAWING NO.	REV. F
MFG. APPR.	MA	D2750	SHEET 3 OF 11
APPROVED	MA	TITLE	SCALE
DE APPR.	MA	350 SKIDTUBE ASSEMBLY	NTS
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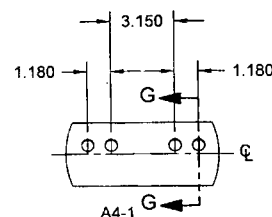
D2750-1 LH SKIDTUBE



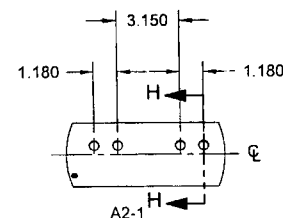
DETAIL A
SCALE 2X



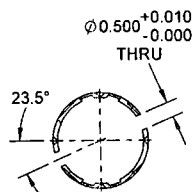
DETAIL B
SCALE 2X



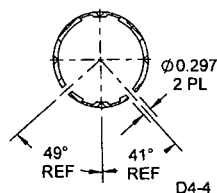
DETAIL C
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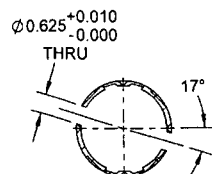
DETAIL D
SCALE 2X



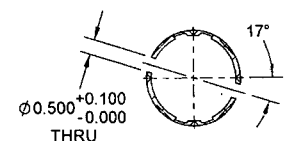
SECTION E-E
SCALE 3X, 2 PL



SECTION F-F
SCALE 3X, 17 PL



SECTION G-G
SCALE 3X, 4 PL



SECTION H-H
SCALE 3X, 4 PL

DESIGN	IPB
DRAWN	IPB
CHECKED	IPB
MFG. APPR.	IPB
APPROVED	IPB
DE APPR.	IPB
DATE	08.07.16

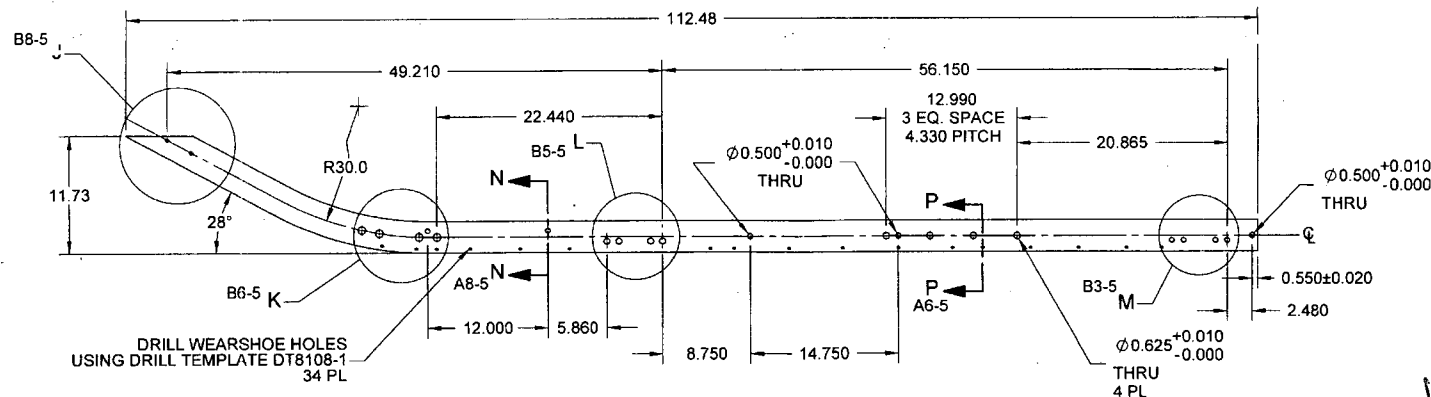
DART AEROSPACE USA, INC.
PORT HADLOCK, WA

DRAWING NO. **D2750** REV. F
SHEET 4 OF 11
TITLE **350 SKIDTUBE ASSEMBLY** SCALE NTS

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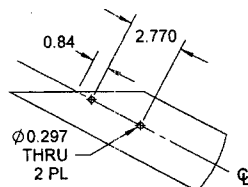
w/6 63849

RELEASED

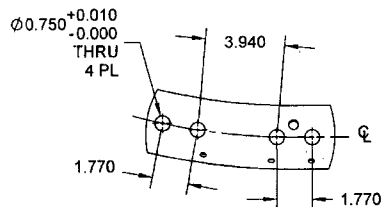


D2750-2 RH SKIDTUBE

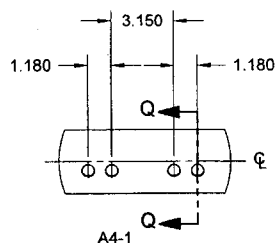
w/ 43849



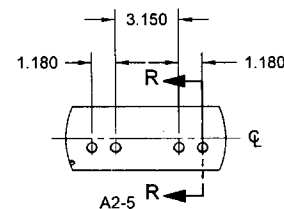
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SCALE 2X



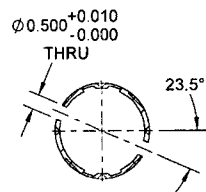
DETAIL K
SCALE 2X



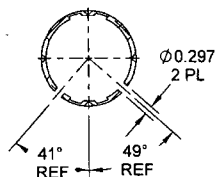
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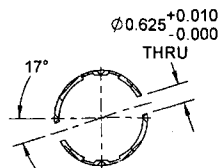
DETAIL M
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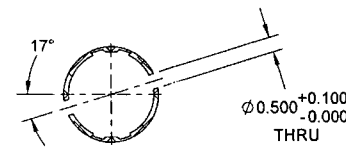
SECTION N-N
SCALE 3X, 2 PL



SECTION P-P
SCALE 3X, 17 PL



SECTION Q-Q
SCALE 3X, 4 PL



SECTION R-R
SCALE 3X, 4 PL

RELEASED

DESIGN		DART AEROSPACE USA, INC.	
DRAWN		PORT HADLOCK, WA	
CHECKED		DRAWING NO. D2750	REV. F.
MFG. APPR.		TITLE 350 SKIDTUBE ASSEMBLY	SHEET 5 OF 11
APPROVED		SCALE	NTS
DE APPR.		COPYRIGHT © 1998 BY DART AEROSPACE USA, INC.	
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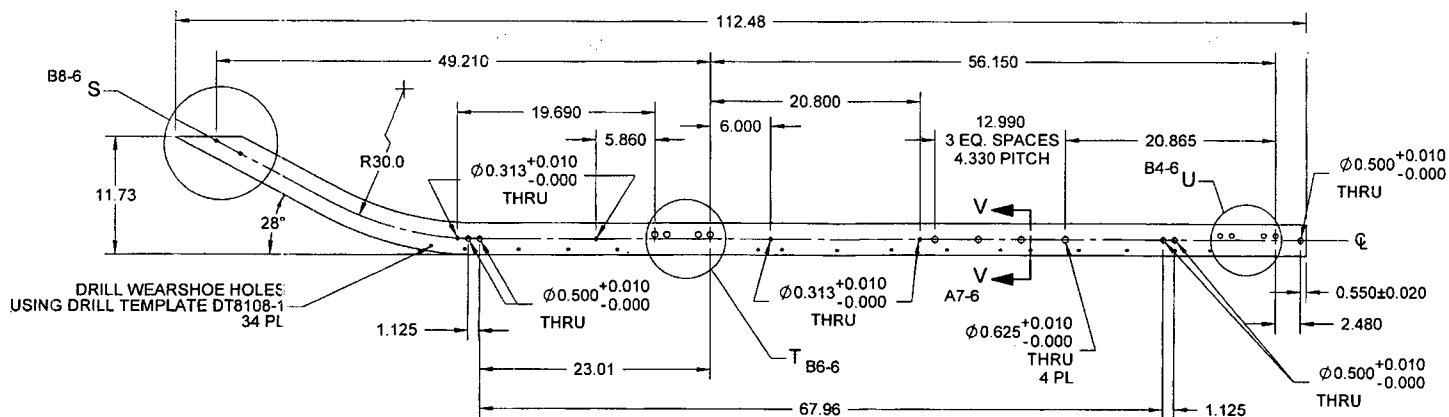
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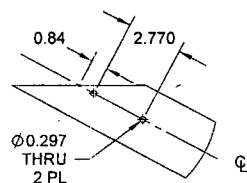
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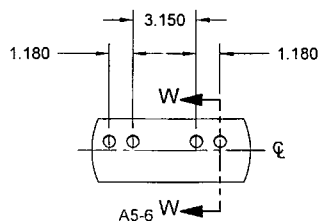
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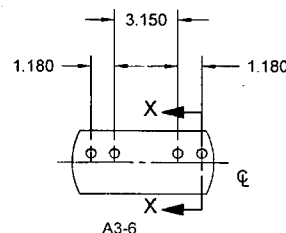
D2750-3 LH SKIDTUBE



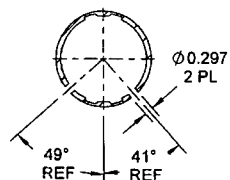
DETAIL S
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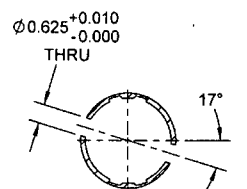
DETAIL T
SCALE 2X



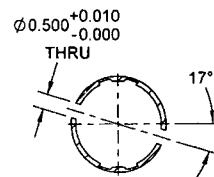
DETAIL U
SCALE 2X



SECTION V-V
SCALE 3X, 17 PL



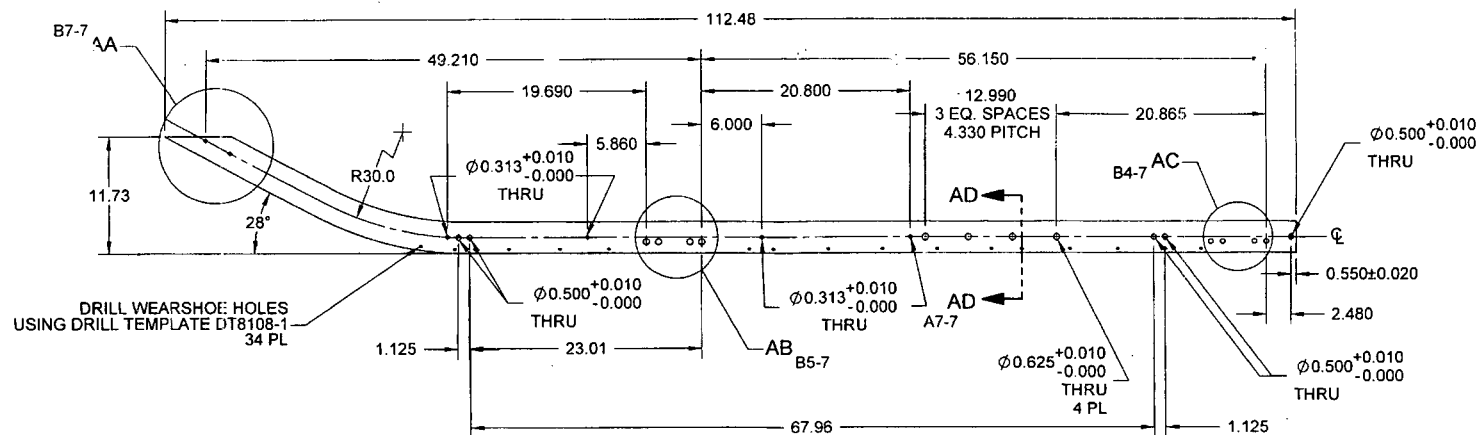
SECTION W-W
SCALE 3X, 4 PL



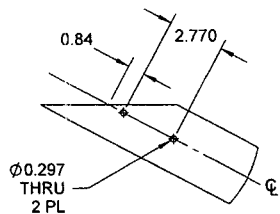
SECTION X-X
SCALE 3X, 4 PL

RELEASED
08-07-16

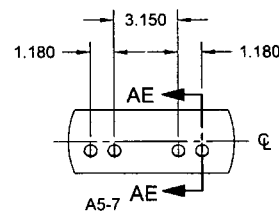
DESIGN		DART AEROSPACE USA, INC.	
DRAWN		PORT HADLOCK, WA	
CHECKED		DRAWING NO. D2750	REV. F
MFG. APPR.			SHEET 6 OF 11
APPROVED		TITLE	SCALE
DE APPR.		350 SKIDTUBE ASSEMBLY	NTS
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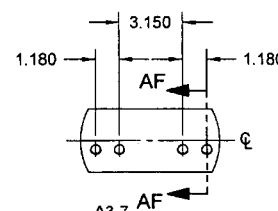
D2750-4 RH SKIDTUBE



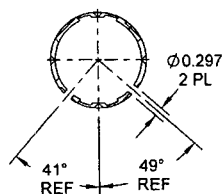
DETAIL AA
SCALE 2X



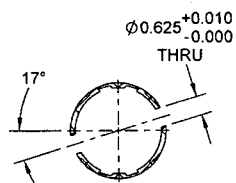
DETAIL AB
SCALE 2X



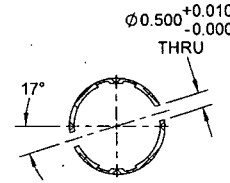
DETAIL AC
SCALE 2X



SECTION AD-AD
SCALE 3X, 17 PL



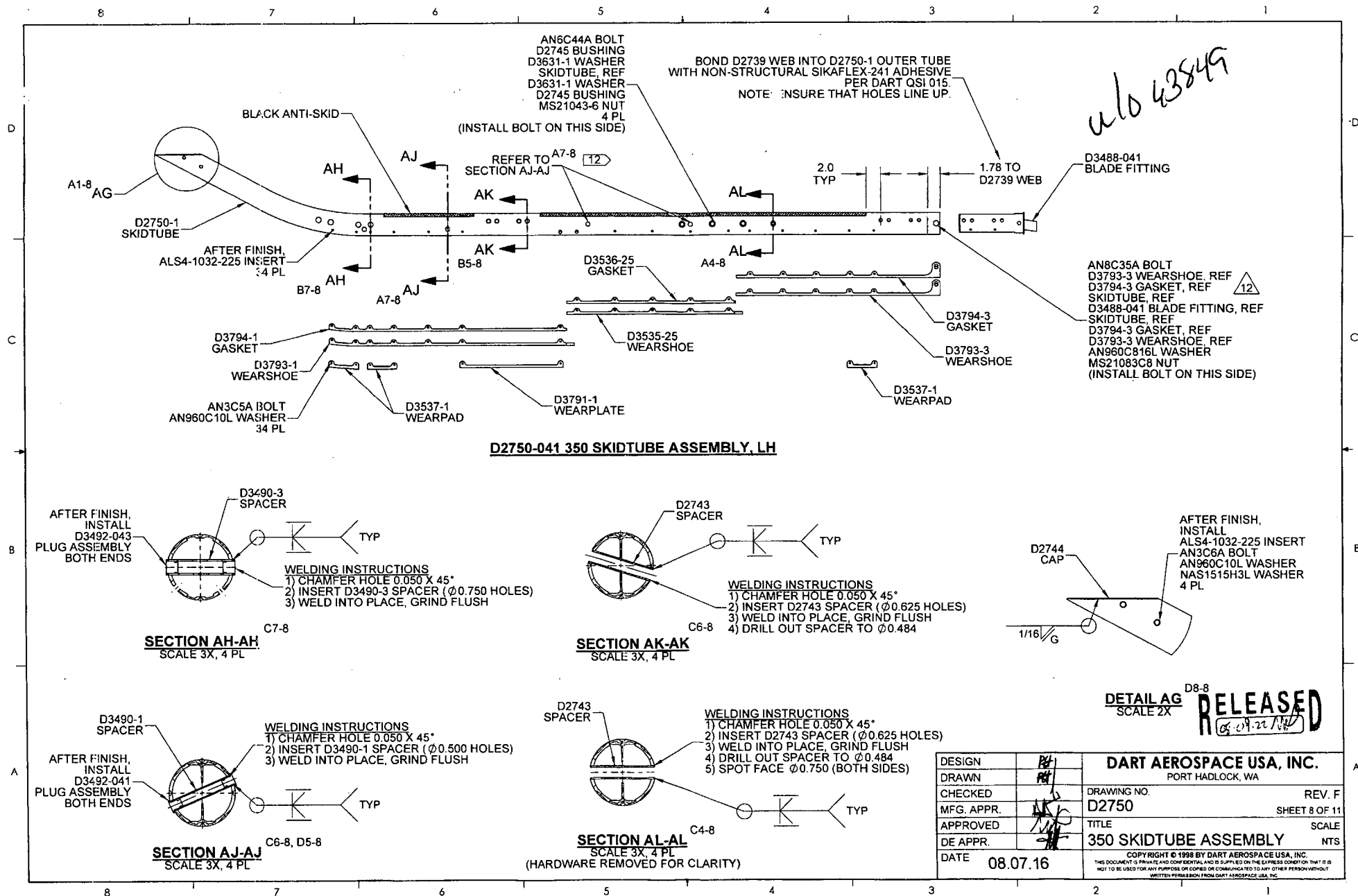
SECTION AE-AE
SCALE 3X, 4 PL



SECTION AF-AF
SCALE 3X, 4 PL

RELEASED

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MFG. APPR.	<i>PH</i>	D2750	SHEET 7 OF 11
APPROVED	<i>PH</i>	TITLE	SCALE
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A1-9

AM

BLACK ANTI-SKID

D2750-2
SKIDTUBE

AFTER FINISH,
ALS4-1032-225 INSERT
34 PL

D3794-1
GASKET

D3793-1
WEARSHOE

AN3C5A BOLT
AN960C10L WASHER
34 PL

AN

B7-9

AN

AP

AQ

A7-9

B5-9

D3537-1
WEARPAD

D3791-1
WEARPLATE

D3536-25
GASKET

D3535-25
WEARSHOE

2.0
TYP

1.78 TO
D2739 WEB

D3488-042
BLADE FITTING

REFER TO
SECTION AP-AP

A7-9

13

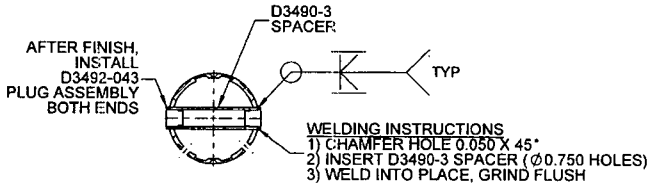
BOND D2739 WEB INTO D2750-2 OUTER TUBE
WITH NON-STRUCTURAL SIKAFLEX-241 ADHESIVE
PER DART CSI 015.
NOTE: ENSURE THAT HOLES LINE UP.

AN6C44A BOLT
D2745 BUSHING
D3631-1 WASHER
SKIDTUBE, REF
D3631-1 WASHER
D2745 BUSHING
MS21043-6 NUT
4 PL
(INSTALL NUT ON THIS SIDE)

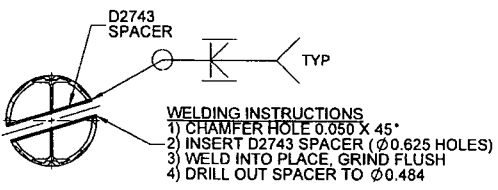
w/o 43849

AN8C35A BOLT
D3793-3 WEARSHOE, REF
D3794-3 GASKET, REF
SKIDTUBE, REF
D3488-042 BLADE FITTING, REF
SKIDTUBE, REF
D3794-3 GASKET, REF
D3793-3 WEARSHOE, REF
AN960C816L WASHER
MS21083C8 NUT
(INSTALL NUT ON THIS SIDE)

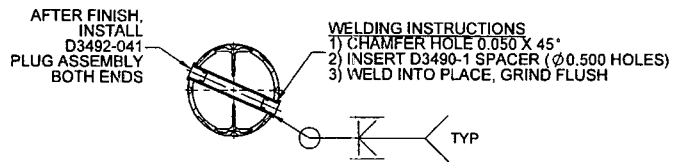
D2750-042 350 SKIDTUBE ASSEMBLY, RH



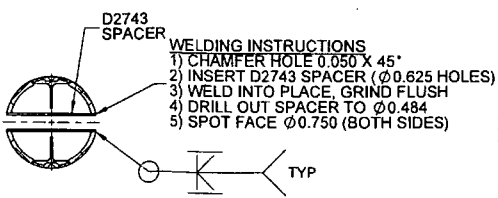
SECTION AN-AN
SCALE 3X, 4 PL



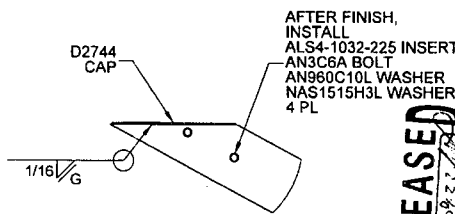
SECTION AQ-AQ
SCALE 3X, 4 PL



SECTION AP-AP
SCALE 3X, 4 PL

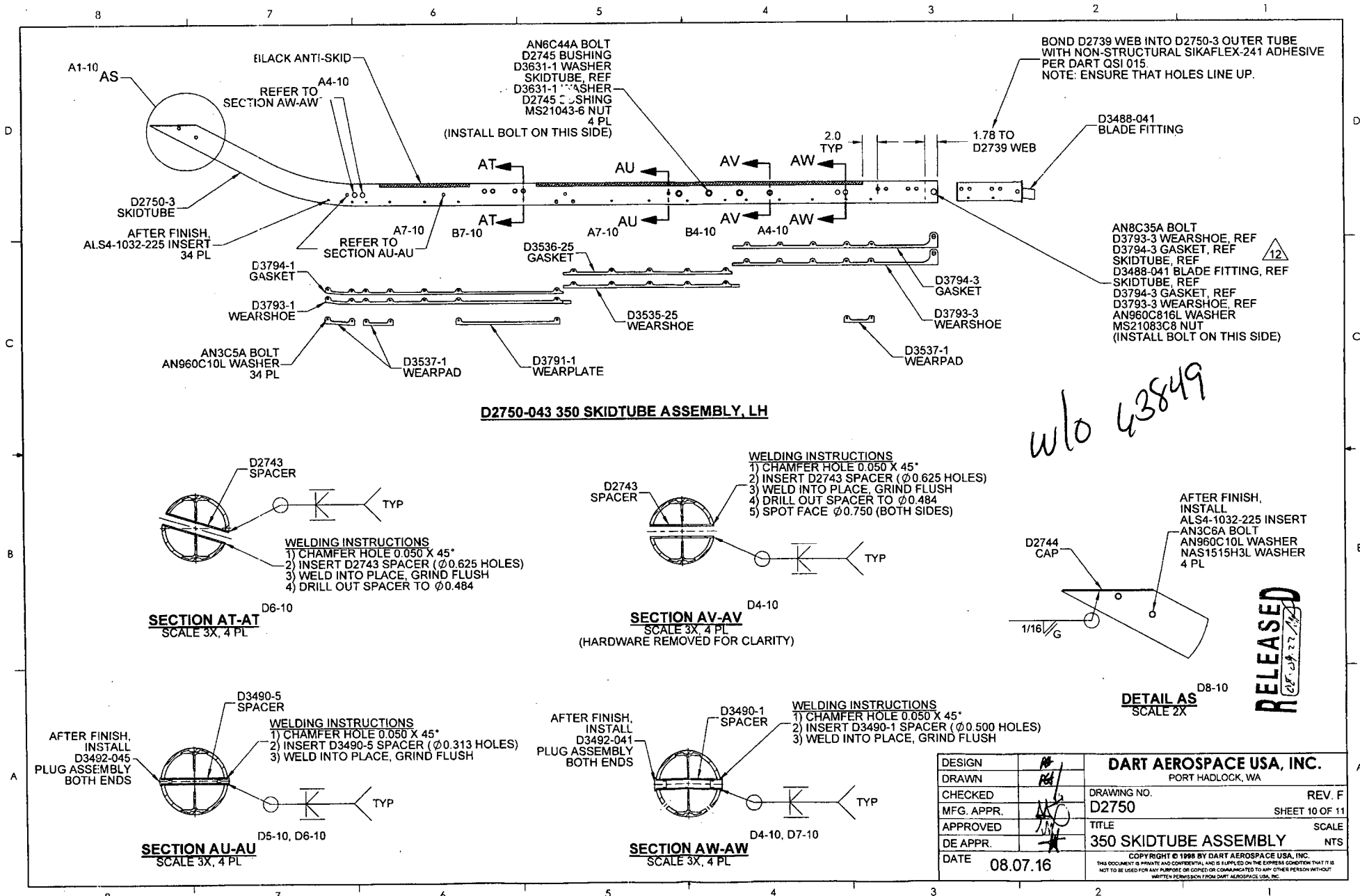


SECTION AR-AR
SCALE 3X, 4 PL
(HARDWARE REMOVED FOR CLARITY)



DETAIL AM
SCALE 2X

DESIGN	PA	DART AEROSPACE USA, INC.	
DRAWN	PA	PORT HADLOCK, VA	
CHECKED	PA	DRAWING NO.	REV. F
MFG. APPR.	MD	D2750	SHEET 9 OF 11
APPROVED	MD	TITLE	SCALE
DE APPR.	MD	350 SKIDTUBE ASSEMBLY	NTS
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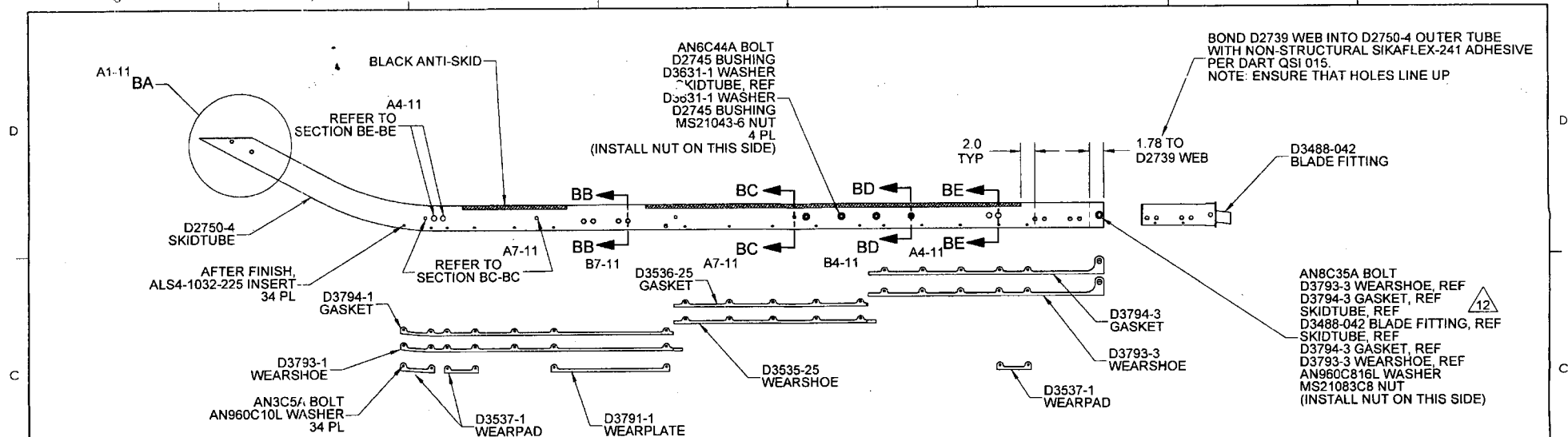
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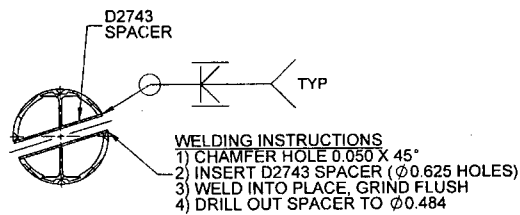
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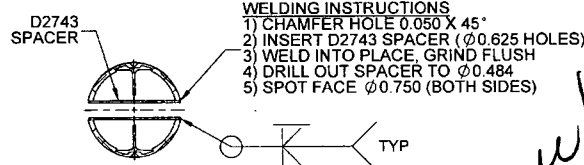
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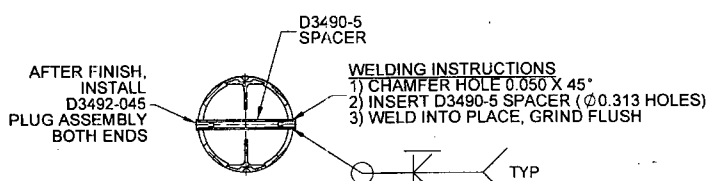
D2750-044 350 SKIDTUBE ASSEMBLY, RH



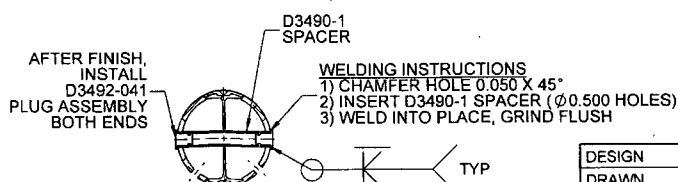
SECTION BB-BB
SCALE 3X, 4 PL



SECTION BD-BD
SCALE 3X, 4 PL
(HARDWARE REMOVED FOR CLARITY)



SECTION BC-BC
SCALE 3X, 4 PL

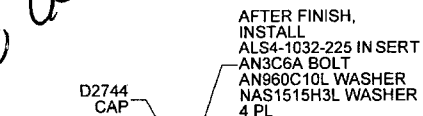


SECTION BE-BE
SCALE 3X, 4 PL

w/o 63849

RELEASED

08 07 22 / 11/16



DETAIL BA
SCALE 2X

DESIGN	11/16	DART AEROSPACE USA, INC.	
DRAWN	11/16	PORT HADLOCK, WA	
CHECKED	11/16	DRAWING NO.	REV. F
MFG. APPR.	11/16	D2750	SHEET 11 OF 11
APPROVED	11/16	TITLE	SCALE
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NO. 239

AWS D17.1.2001
QUALIFICATION TEST RECORD

Name: Barclay Elliott
Job number: 61946 61914
Part number: D350.636.012
Description: 350 skid
Welding Process: Tig[☒] Mig[]
Base material: Aluminum
Current: AC[☒] DC[]

TEST REQUIREMENTS AND RESULTS

Visual: pass[☒] fail[]
Penetration: pass[☒] fail[]

UNACCEPTABLE

Cracks: pass[☒] fail[]
Undercut: pass[☒] fail[]
Pin holes: pass[☒] fail[]
Overlap (cold lap): pass[☒] fail[]
Porosity (surface): pass[☒] fail[]
Coloration: pass[☒] fail[]

Qualifier P. J. Duff Date of Test Coupon 10.09.30

Welder Barclay Elliott Date of Test Coupon 10.09.30

The above named individual is qualified in accordance with AWS D17.1.2001 to weld